MAKERERE UNIVERSITY BUSINESS SCHOOL
FACULTY OF COMPUTING AND INFORMATICS
DEPARTMENT OF INFORMATION SYSTEMS

PROJECT RESEARCH METHODS COURSE OUTLINE
BACHELOR OF BUSINESS COMPUTING
YEAR TWO

COURSE CODE: BUC3111 **CREDIT UNITS**: 3
ACADEMIC YEAR: 2023/2024 **SEMESTER**: TWO

FACILITATORS: Dr. Samali V. Mlay, Mr. Ismael Kato

Course Description

Scientific Research attempts to get the truth of particular problems through systematic and rational methods. Business research employs scientific analysis to aid in wise decision making. This course addresses how research skills apply to the social sciences and business with a specific focus on Information Systems project research.

The purpose of this course is to introduce and develop learners' skills and knowledge on how to conduct research. It is meant to acquaint learners with types of scientific research relevant for anyone working in the field of Science and Information Technology. It will enable learners to develop capacity to conduct small, simple research projects while in and out of the university. Guidelines outlining the preparation and writing of a project proposal and report will be provided at the conclusion of the course.

Course Objectives

The course intends to:

- Describe the nature of scientific research
- Illustrate the research process
- Explain the ethical issues in research
- Provide skills that will enable learners undertake independent research using a variety of appropriate methods, using primary and secondary data, as well as qualitative and quantitative techniques;
- Provide learners with skills to write a research proposal;
- Introduce learners to report writing.

Learning Outcomes

At the end of the course, the students should be able to:

- Discuss and explain the nature of scientific research

- Develop insightful and practical research questions
- Review literature related to their research
- Develop a good research project proposal.
- Develop a good research project report.
- Explain the ethical issues in research

Detailed Course Content

SN	Topic	Content	Week
1.	Introduction to Research methods	a. Research methods overview b. Why do we carry out research? c. The importance of research d. Qualities of a good researcher e. The limitations of research f. Definition of the basic terms g. Types of research h. Research Variables i. Research Planning and Management	1-2
2.	Elements/Principles/ Hallmarks of scientific research	a. Replicability b. Objectivity c. Measurement d. Observation e. Control f. Validity g. Reliability h. Causal explanation i. Falsifiability j. Prediction k. Ethical considerations	3
3.	Values and Ethics in the Research Process	a. Values in research b. Ethics in research	4
4.	Developing a research Project	a. Identifying researchable areas b. Writing an introduction/background of the study c. Identifying and writing research problems d. Writing research purpose, objectives and questions; e. Writing the scope and the significance of the study.	5-6
5.	Conducting a literature review	a. Sources of literature b. Types of literature review c. Referencing using APA style	7-8

		d. References and Bibliography	
6.	Research Design	a. Characteristics of a good research design b. Important concepts relating to Research Design c. Forms and types of research Design d. Research design for Computer Science research	9
7.	Research Methodology	a. Selection of overall methodological approach. b. Types of Research Methods. c. Types of data/ requirements (qualitative and quantitative) d. Sources of requirements (primary and secondary data) e. Requirements Engineering - Methods of collection/ elicitation, Analysis, Specification, Validation and Management	10-11
8.	Systems Analysis and Design	a. System analysis - Current situation/system – Users, Hardware, software, Systems etc… b. Requirements Specification - Functional, non-functional, system, user, organisational etc c. System design - The proposed situation/system (Object Oriented Design or Structural Design)	12
9.	System Development, Presentation and Testing	a. System development b. System presentation c. Presentation of test results	12
10.	Validation and Evaluation	a. System Validation b. System Evaluation c. Recommendations d. Limitations.	12

Consultations

For further consultations, facilitators can be contacted out of class during week days between 8am - 5pm. Please obtain the telephone number and office number from the respective facilitators.

Mode of delivery (Teaching and Learning Methods)

- Face-to-face and online lectures
- Research articles review
- Class presentations
- Proposal writing
- Independent study
- Research Supervisor guidance

Course Assessment

1. Coursework (2 tests) = 30%
2. Examination (End of Semester) = 70%

The assignment and examination schedules will be officially communicated through timetables. Learners are required to access the timetable and endeavor to sit for the assignments as and when timetabled. Learners are required to attempt at least two assignments and the final examination in order to complete the course. The pass mark for the course is 50%.

Learning Management System

Learners are required to enroll themselves on the Makerere University Business School Education Portal - Mubsep (mubsep.mubs.ac.ug); an online Moodle Online Learning Management System. All communication, teaching materials, assignments, results and discussion forum will be done on that forum.

Participation

Every learner is required to attend at least 70% of the classes to fulfil the minimum requirements to sit for the final examination. Learners must use their official full names when logging on for the online classes for online registration.

Reading List

1. David J. Creswell & John W. Creswell (2022). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. 6th Ed. Sage Publications.
2. Hair, J. J., Page, M., Brunsveld, N., Merkle, A, & Cleton, N. (2023). *Essentials of business research methods*. 5th Ed., Routledge.
3. Mark N.K. Saunders, Philip Lewis & Adrian Thornhill (2015). *Research Methods for Business Students*. 7th Ed. Pearson. ISBN-10: 1292016620, ISBN-13: 978-1292016627.
4. Sekaran, U., & Bougie, R. (2016). *Research methods for business: A skill building approach.* 8th Ed., John Wiley & Sons.